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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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05/06/2003
Abanti B. Singla
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EXAMINER

BELLAMY, TAMIKO D

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 05/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/081,649

Applicant(s)

DURON ET AL.

Examiner

Tamiko D. Bellamy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) 8-10 and 44-46 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-7, 11-43 and 47-73 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-7, 11-43, and 47-73, drawn to a device for detecting a collapse of a structure, classified in class 73, subclass 493.
 - II. Claims 8-10, and 44-46, drawn to a display apparatus, classified in class 345, subclass 418.
2. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are a system for detecting collapse of a structure and a display device.
3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Abanti Singla on April 25, 2003 a provisional election was made without traverse to prosecute the invention of Group 1, claim 1-7, 11-43, and 47-73. Affirmation of this election must be made by applicant in replying to this Office action. Claims 8-10 and 44-46 have been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
5. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-7, 11-43, and 47-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over McEachern et al. (5,526,694).

With respect to claims 1, 11, 25, 37, 47, 61 and 73, McEachern et al. discloses in Fig. 1, a single-axis accelerometer 1 that measures the resonant accelerations of a building structure 2 (col. 2, lines 55-57), an amplifier 3, a filter 4, and the output of the filter 4 is coupled to an A-D converter 5 to sample the waveform as it is input. With respect to further limitations of claims 11, 25 and 61, McEachern et al. discloses a display 7, and a processor 6 that are coupled to the accelerometer 1. Furthermore, McEachern et al. discloses a microprocessor 6 including a storage element 9, which may be a battery backed memory (col. 4, lines 1-3). With respect to further limitations of claims 37 and 61, McEachern et al. discloses a microprocessor 6 converts the time-domain samples from the analog-to-digital converter to frequency-domain samples (col. 3, lines 29-30). The use of a battery is equivalent to a second power source. McEachern et al. does not specifically disclose a power source connected to an accelerometer, a transmitter that is coupled to the filter and converts the acceleration responses to an analog signal, a remote receiver that receives the analog signals. It is well known in the art that accelerometers incorporate an internal power source such as a battery cell or other source of power.

Furthermore, the device in which McEachern et al. discloses couples a filter 4 to the A-D converter; the output from the filter 4 is an analog signal based on an acceleration response. Hence, the omission of an element and its function in a combination, where the remaining elements perform the same functions as before, involves only routine skill in the art. In re Kuhle, 526 F.2d 553, 188 USPQ 7 (CCPA 1975); In re Karlson, 311 F.2d 581, 136 USPQ 184 (CCPA 1963).

With respect to claims 2, 12, 26, 38, 48, and 62, McEachern et al. discloses the accelerometer 1 is sensitive to measure the resonant accelerations of a building structure as it responds to wind 10 between 1 and 10 meters per second; and a sensitivity of 10 micro-g's is desirable (col. 2, lines 55-63). Furthermore, McEachern et al. discloses the use of an accelerometer model QA-2000 (col. 2, lines 66-67). From the specifications of the model QA-2000 the accelerometer detects environmental vibrations from 20-2000Hz. McEachern et al. lacks the detail of accelerometer having a reading range of 0 to 30 Hz. However, the particular range of an detected frequency, absent any critically, is only considered to be the "optimum" range of the frequency used by the prior art to sense the resonant accelerations such that a person having ordinary skill in the art at the time the invention was made would have been able to determine using routine experimentation.

With respect to claims 3, 13, 27, 34, 39, 49, and 63, McEachern et al. discloses an accelerometer 1. McEachern et al. does not specifically disclose a power source connected to an accelerometer, and the power source incorporates internal batteries. However, it is well known in the art that accelerometers incorporate an internal power source such as a battery cell or other source of power.

With respect to claims 4-6, 14-16, 28-30, 40-42, 50-52, and 64-66, McEachern et al. discloses the use of an accelerometer model QA-2000 (col. 2, lines 66-67). From the specifications of the model QA-2000 the accelerometer includes a stainless steel casing, and operates in an environment having a temperature range of -55 to 95 degrees Celsius.

With respect to further limitations of claims 5 and 15, McEachern et al. discloses the accelerometer is firmly attached to a building structure 1 (col. 2, lines 49-50).

McEachern et al. lacks the detail the device with a thermal casing constructed to protect device from heat damages at the temperature range up to 1900 degrees Fahrenheit (cls. 4 and 14), and the casing having an on-off indicator (cls. 5 and 15).

However, type of casing material used protect an accelerometer is a design consideration clearly within preview of one of ordinary skill in the art. However, it is well known in the art to use an accelerometer including switch mechanism. Therefore, it would have been obvious to one of ordinary skill in the art to provide McEachern et al. with a thermal casing that includes a switch, so that the device is reliably and accurately detect resonant accelerations of a structure exposed to high temperatures. The device also provides an indication of when the accelerometer is detecting and recording resonant accelerations.

With respect to claims 7,17, 31, 43, 53, and 67, McEachern et al. discloses the accelerometer is firmly attached to a building structure 1 (col. 2, lines 49-50).

McEachern et al. dose not specifically disclose that the casing including an attachment means comprises adhesives and bolts. However, the selection known materials is a design consideration clearly within the preview of one having ordinary skill in the art. Therefore, it would have been obvious to one of ordinary skill in the art to provide

McEachern et al. with a means for attachment to a structure using adhesive and bolts so that the device is tightly secured to the observed structure.

With respect to claims 18-22, and 55-58, McEachern et al. discloses in Figs. 1 and 2 the spectrum and control information may be passed to the instrument from another computer via communications port 8; and the spectra is shown on the display 7 (col. 4, lines 21-24). As shown in the figure, the display 7 and the processor 6 are coupled to the accelerometer 1. McEachern et al. does not specifically disclose the use of a supply line that is waterproof. However, it is well known in the art that a display device includes a cord with a plastic coating to connect to a processor or other device. Therefore, it would have been obvious to one of ordinary skill in the art to provide McEachern et al. with a supply line, so that the acceleration output signals from the device are transported to a display for further analysis.

With respect to claims 23, 24, 35, 36, 59, 60, and 70-72, McEachern et al. discloses a microprocessor 6 including a storage element 9, which may be a battery backed memory (col. 4, lines 1-3). The use of a battery is equivalent to a second power source. McEachern et al. lacks the detail of the first power source receiving power from a second power source. However, the use of multiple power sources, which are interconnected, is a design consideration clearly within the preview of one of ordinary skill in the art.

With respect to claims 32-33, and 68-69, McEachern et al. discloses in Fig. 1 a processor 6, a storage element 9, and a display 7 that are coupled together. McEachern et al. lacks the detail of a wireless transmission system. It is well known in the art to use an

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accelerometer within a wireless communication network. Therefore, it would have been obvious to one of ordinary skill in the art to provide McEachern et al. with a wireless system, so that device can monitored at a desired location.

With respect to claim 74, McEachern et al. discloses a single-axis accelerometer 1 that measures the resonant accelerations of a building structure 2 as it responds to wind 10 (col. 2, lines 55-57). McEachern et al. lacks the detail of monitoring acceleration responses during burn of the structure. However, a recitation with respect to the manner in which an apparatus is intended to be employed does not impose any structural limitation upon the claimed apparatus that differentiates it from a prior art reference disclosing the structural limitations of the claim. In re Pearson, 494 F.2d 1399, 181 USPQ 641 (CCPA 1974); In re Yanush, 477 F.2d 958, 177 USPQ 705 (CCPA 1973); In re Finsterwalder, 436 F.2d 1028, 168 USPQ 530 (CCPA 1971); In re Casey, 370 F.2d 576, 152 USPQ 235 (CCPA 1967); In re Otto, 312 F.2d 937, 136 USPQ 458 (CCPA 1963); Ex parte Masham, 2 USPQ2d 1647 (BdPatApp & Inter 1987). Therefore, it would have been obvious to one of ordinary skill in the art to provide McEachern et al. an accelerometer that monitors a burning structure, so that device has the capability to monitor and record multiple factors that cause damage to structure.

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Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamiko D. Bellamy whose telephone number is (703) 305-4971. The examiner can normally be reached on Monday through Friday 9:00 AM to 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Tamiko Bellamy

T.B.

April 29, 2003

HELEN KWOK
PRIMARY EXAMINER

